

REMARKS

By the foregoing amendment applicant has canceled claims 38-39, 42 and 52. Accordingly, claims 31-37, 40-41, 43-51 remain pending.

The claimed invention comprises the step of (i) subjecting a cyclic formal to allylation and step (ii) subjecting obtained allyl ether to ring opening reaction with alcohol yielding a hydroxy functional allyl ether, wherein the allyl substitution is selectively, and a formal of said alcohol. A formal is a reaction product between a di, tri, or polyfunctional alcohol and formaldehyde and the formal of the present invention must, according to claim 31, be a formal of a tri or polyfunctional alcohol, thus having at least one free hydroxyl group wherein two hydroxyl groups are acetal protected and can thus not be subject for allylation in said step (i). In step (i) yielded allyl formal is, in step (ii), transformed into a selectively allylated alcohol, having two or more free hydroxyl groups, and liberated formaldehyde reacts with added alcohol yielding a new non-allylated formal. The process of the claimed invention can be exemplified by allylation of a formal trimethylolpropane and formaldehyde, which in step (ii) solely yields ditrimethylopropane monoallyl ether as two hydroxyl groups during allylation is formal protected. Allylation of trimethylolpropane, without formal protection, yields, at the same molar amounts of allyl halide, trimethoylopropane, monoallyl ether and certain, statistical, amounts of trimethoylopropane diallyl ether, trimethylolpropane triallyl ether and non-allylated trimethylolpropane. The same is valid for pentaerythritol, ditrimethylolpropane, and so on.

None of the documents cited by the Examiner disclose or contemplate, either alone or in combination, a process comprising said steps and the documents are thus irrelevant to the question of patentability of the present invention.

Thus, formal reconsideration of the rejections of claims 31-37, 40-41 and 43-51 of the 35 U.S.C. 103 (a) as being unpatentable over Roach et al.(U.S. Patent 2,585,035) in view of Hoover (U.S. Patent 1,934,309) and Scott (U.S. Patent 2,183,847) and further in view of

Burger et al. (U.S. Patent 3,290,388) and Arundale et al. (U.S. Patent 2,421,862) is respectfully requested.

Roach et al relates to ethers of highly functional alcohols produced by condensation of polyfunctional alkylating agents, such as polyhalogens and polyepoxides, and polyhydroxy compounds. Formals of said polyhydroxy compounds are neither mentioned or contemplated in Roach et al. Furthermore, the claimed invention does not use any polyhalogen or polyepoxides. As there is no single compound disclosed in Roach et al. common with the present method and because “inherency” is a concept under the standards of anticipation (35 U.S.C. 102) and not within the context of obviousness under 35 U.S.C. 103 (a), the Examiner’s statement as to her belief “that the instant invention is inherently taught by Roach et al.” is inappropriate in an obviousness rejection. As the Court of Appeals for the Federal Circuit stated in Kloster Speed Steel AB v. Crucible Inc., 230 USPQ81, 88; “inherency and obviousness or distinct concepts”, citing WL Gore and Associates v Garlock Inc., 220 USPQ 303,314 (Fed. Cir. 1983) citing In re Sporman, 150 USPQ 449, 452 (1966), cert. denied, 105 S.Ct. 172 (1984). Rather, as set forth in the KSR decision, the Examiner has the initial burden of fulfilling the three step John Deere test, including ascertaining the differences between the prior art and the claimed invention. Such a test is not fulfilled by alleging “inherency” of a reference.

The cited Hoover, patent relates to production of cyclic acetals, but applicants do not seek protection of production of cyclic acetals. Applicants do use a specific cyclic acetal, namely a formal, as a raw material for production of ally or methallyl ether of polyhydric compounds. Thus, Hoover is irrelevant to the present claims. Scott relates to a process for reacting alkali metal with aromatic hydrocarbons, but applicants are completely puzzled by the citation of Scott as this is totally irrelevant to the claimed invention, and note that Scott is not even mentioned in the body of the rejection. Burger et al. teaches reactions between alkali metal salts of glycerol acetals and ketals and unsaturated halides. Any such reaction is

not utilized in the present process and thus cannot anticipate, nor make obvious, step (i) of the claimed invention. However, in order to completely remove the Burger et al. citation, the amended claims delete all references to glycerol and glycerol derivatives and the remaining claims are directed to 2,2-substituted-1,3-propanediols and derivative and reaction products thereof.

Lastly, while it is stated in the Office Action that “Arundale et al. teach a process where cyclic acetals or unsaturated derivatives thereof are converted to the corresponding polyhydric alcohol or unsaturated derivatives thereof”, as applicants have explained above, taking allylation of trimethylolpropane as exemplary, such allylation, without formal protection, yields, at the same molar amounts of allyl halide, trimethylolpropane, mono allylether and certain statistical amounts of trimethylolpropane diallyl ether, trimethylolpropane and non-allylated trimethylolpropane. The same is true for the pentaerythritol and ditrimethylolpropane reactants. Thus, the mere teaching of temperature ranges, without more, does not teach one of ordinary skill of the art how to modify the Roach et, Hoover, Scott, and Burger et al. teachings to arrive at the claimed invention.

Applicants respectfully submit that the Examiner has completely failed to establish a prima facie case of obviousness for the claimed invention.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 14-1437, under Order No. 8722.007.US0000.

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Respectfully submitted,



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